

How Do Ticks Survive Winter?

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Ticks survive winter depending on the species, what stage it has reached in its life cycle when temperatures drop and its luck in finding a host to feed on.

Some ticks survive as eggs deposited before winter; some ticks in other stages take refuge in the soil or in the insulation of leaf debris or vegetation; others enjoy the winter feeding on a warm mammalian host.

For example, the hard ticks that carry Lyme disease, adult deer ticks of the species *Ixodes scapularis* or *Ixodes dammini*, look for a host for the winter. The ones that fail generally take cover and become inactive when the temperatures are below 40 degrees and do not become active until temperatures rise in late winter and early spring. The successful ones spend the winter feeding on a deer's blood.

The winter deer tick, *Dermacentor albipictus*, which feeds on one moose or deer all its life, waits on vegetation for a passing host while it is still in the larval stage. Once attached, it actively feeds through several weeks of winter, molting into a nymph and then an adult. The females drop off in early spring to lay eggs.

Some female hard ticks lay batches of eggs and then die; the eggs survive to hatch into the next generation. In northern climates, where the hard tick's life cycle may take up to three years, certain stages go into a suspension of activity called diapause and wait for hosts to be available again.

The lack of food is not an immediate threat to ticks. Hard ticks can often survive for several months without feeding, and some soft ticks, like the species that carries relapsing fever, can go for several years between meals. Soft ticks are found in western and southern United States.